СЕКЦІЯ 3
КОМП'ЮТЕРНО-ІНТЕГРОВАНІ ТЕХНОЛОГІЇ ВИРОБНИЦТВА ПРИЛАДІВ

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TECHNOLOGY OF REPAIRING THE MAIN PIPELINE USING BRAZE-WELDED COUPLINGS

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During operation, the main pipeline needs to be repaired. During periodic diagnostics of the state of pipelines defects are detected, some of which are unacceptable [1]. The classic method of repairing, that involves the shutdown of the pipeline with subsequent replacement of its defective spots, requires significant financial costs and is associated with a forced outage pipeline and ecological destruction [2].

The purpose of the researches to improve the technology of increasing the strength of spots of high-pressure main pipelines by means of welded couplings filled with molten metal. Strength improvement of the spots of the active pipeline is realized by installing an active main pipeline of brazed-welded couplings [3]. The article suggests a technique for strength improvement of pipeline spots using couplings filled with a molten metal that have a high modulus of elasticity. The operations of formation of under coupling layer with the parameters that provide achievement of the maximum value of the stresses reduction degree in the reinforced pipe are proposed, provide an even load distribution between the wall of the spot of the pipeline being repaired and the coupling shell.

An improved technology for repairing defective spots of the active pipeline has been proposed, designs for front seals have been proposed that facilitate the formation of under coupling layer with optimal parameters [3,4]. The proposed technique makes it possible to increase the efficiency of the strengthening of pipes of small and medium diameters [5].

Keywords: technology, coupling, nondestructive, control, diagnostics, repair, gas pipeline, pipeline, pressure, gas, transit.

References:

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